

Application No.: 10/725,207

Case No.: 58209US004

Amendments to the Claims

The following listing of claims will replace all prior versions of claims in the application.

1. (Currently Amended) A fluoroplastic comprising a nitrogen-containing cure site and units derived from a fluorinated monomer, wherein the cure site is selected from an amidine group, a salt thereof, and combinations thereof.

2 (Original) A fluoroplastic according to claim 1 wherein said nitrogen-containing cure site is derived from a nitrogen-containing cure site monomer.

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6. (Original) A fluoroplastic according to claim 1 wherein said fluorinated monomer is selected from the group consisting of perfluoroolefins, perfluorovinyl ethers, and combinations thereof.

7. (Original) A fluoroplastic according to claim 6 wherein said perfluoroolefin comprises tetrafluoroethylene.

8. (Original) A fluoroplastic according to claim 6 wherein said perfluorovinyl ether is selected from the group consisting of perfluoroalkylvinyl ethers, perfluoroalkoxyvinyl ethers, and combinations thereof.

9. (Original) A fluoroplastic according to claim 1 comprising units derived from (a) a nitrogen-containing cure site monomer, (b) tetrafluoroethylene, and (c) a perfluoroalkylvinyl ether.

10. (Original) A fluoroplastic according to claim 1 wherein said nitrogen-containing cure site is derived from a nitrogen-containing chain transfer agent.

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11. (Original) A fluoroplastic according to claim 1 wherein said fluoroplastic further comprises bromine atoms, iodine atoms, and combinations thereof.
12. (Original) A fluoroplastic according to claim 1 wherein said fluoroplastic is in the form of a core-shell polymer in which the core comprises units derived from the fluorinated monomer and the shell comprises the nitrogen-containing cure site.
13. (Currently Amended) A latex comprising fluoroplastic particles that include a nitrogen-containing cure site and units derived from a fluorinated monomer, wherein the cure site is selected from an amidine group, a salt thereof, and combinations thereof.
14. (Original) A latex according to claim 13 wherein said particles have a particle size ranging from about 10 to about 500 nm.
15. (Currently Amended) A curable blend comprising: (a) a fluoroplastic and (b) a ~~fluoroelastomer~~ fluoroelastomer gum, said fluoroplastic comprising a nitrogen-containing cure site and units derived from a fluorinated monomer.
16. (Original) A curable blend according to claim 15 wherein said nitrogen-containing cure site is derived from a nitrogen-containing cure site monomer.
17. (Original) A curable blend according to claim 16 wherein said nitrogen-containing cure site monomer is selected from the group consisting of nitrile-containing cure site monomers, amidine-containing cure site monomers and salts thereof, imidate-containing cure site monomers, and combinations thereof.
18. (Original) A curable blend according to claim 17 wherein said nitrogen-containing cure site monomer comprises a nitrile-containing cure site monomer.

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19. (Original) A curable blend according to claim 15 wherein said fluorinated monomer is selected from the group consisting of perfluoroolefins, perfluorovinyl ethers, and combinations thereof.
20. (Original) A curable blend according to claim 15 wherein said nitrogen-containing cure site is derived from a nitrogen-containing chain transfer agent.
21. (Original) A curable blend according to claim 15 wherein said fluoroplastic further comprises bromine atoms, iodine atoms, and combinations thereof.
22. (Original) A curable blend according to claim 15 wherein said fluoroplastic is in the form of a core-shell polymer in which the core comprises units derived from the fluorinated monomer and the shell comprises the nitrogen-containing cure site.
23. (Original) A curable blend according to claim 15 comprising from about 1-70% by weight of said fluoroplastic.
24. (Original) A cured, shaped article comprising: (a) a fluoroplastic and (b) a fluorocastomer, said fluoroplastic comprising a nitrogen-containing cure site and units derived from a fluorinated monomer.
25. (Original) A cured, shaped article according to claim 24 wherein said article has a compression set no greater than about 70% after 70 hours at 315°C.
26. (Original) A cured, shaped article according to claim 24 wherein said nitrogen-containing cure site is derived from a nitrogen-containing cure site monomer.
27. (Original) A cured, shaped article according to claim 26 wherein said nitrogen-containing cure site monomer is selected from the group consisting of nitrile-containing cure site monomers,

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amidine-containing cure site monomers and salts thereof, imidate-containing cure site monomers, and combinations thereof.

28. (Original) A cured, shaped article according to claim 27 wherein said nitrogen-containing cure site monomer comprises a nitrile-containing cure site monomer.

29. (Original) A cured, shaped article according to claim 24 wherein said fluorinated monomer is selected from the group consisting of perfluoroolefins, perfluorovinyl ethers, and combinations thereof.

30. (Original) A cured, shaped article according to claim 24 wherein said nitrogen-containing cure site is derived from a nitrogen-containing chain transfer agent.

31. (Original) A cured, shaped article according to claim 24 wherein said fluoroplastic further comprises bromine atoms, iodine atoms, and combinations thereof.

32. (Original) A cured, shaped article according to claim 24 wherein said fluoroplastic is in the form of a core-shell polymer in which the core comprises units derived from the fluorinated monomer and the shell comprises the nitrogen-containing cure site.

33. (Original) A blend comprising (a) a latex comprising fluoroplastic particles and (b) a latex comprising fluoroelastomer gum particles, said fluoroplastic particles comprising a nitrogen-containing cure site and units derived from a fluorinated monomer.

34. (Original) A blend according to claim 33 wherein said fluoroplastic particles have a particle size ranging from about 10 to about 500 nm.

35. (Original) A process for preparing a fluoroplastic comprising: (a) introducing a first polymerizable composition comprising at least one fluorinated monomer into a polymerization reactor; (b) polymerizing said composition in said reactor to form an at least partially

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polymerized composition; (c) introducing up to 40 weight percent (based on the total weight of compositions introduced to the reactor) of a second polymerizable composition into the reactor, said composition comprising at least 70 weight percent of nitrogen-containing cure site component; and (d) copolymerizing said nitrogen-containing cure site component with said fluorinated monomer to form a fluoroplastic.

36. (Original) A process according to claim 35 comprising introducing up to about 20 weight percent of said second polymerizable composition.

37. (Original) A process according to claim 35 comprising introducing up to about 10 weight percent of said second polymerizable composition.